

Applied Data Science Capstone Project

Author: Sudeep Gupta

1. Business Problem:

The Tourism industry of New York is one of the most prominent industries in the city, quite understandably so as it is a cultural melting pot and gets millions of visitors from all parts of the world. Several local tourism agencies have sprung up in the different areas of the city and they compete against each other for providing the most memorable experience of New York to the enthusiastic tourists. In order to bring about such an experience, these agencies have to keep abreast of the changing dynamics of the popular spots in the city such as staying up to date with what restaurants are becoming the most popular in a locality or what museums are pulling in the most visitors. This helps them in suggesting the best and most fulfilling places to their visitors. Furthermore, they also have to figure out which localities are similar in nature and cluster different tourist places together so that their packages can include localities exhibiting varied culture and tastes in order to give a complete as well as cosmopolitan experience of New York to their customers.

To solve all these challenges and much more, these tourism agencies can leverage the powers of Data Science, especially the services of the Foursquare API which can answer the most important queries of their customers instantly. Moreover, the insights cultivated from the analysis of the tourism data of these places shall help such agencies to re-invent their business strategies and truly establish their hegemony over fellow competitors.

2. Data Requirements:

For the above problem, we would mainly focus on leveraging the regular as well as a few premium call services of the Foursquare API to extract the data required to analyse and study the tourist traffic and other significant details about the popular spots in New York. The data would consist of facts such as how many people frequent a given tourist spot in a day and which place receives the maximum number of visitors. It would also specify the type of tourists a particular place receives which can be leveraged to match tourists of a certain ethnicity/taste to the places that they would most likely want to visit during their stay in New York.

For instance, if a certain Mexican restaurant is famous in some locality of New York, tourists who would be interested in trying Mexican food can be matched up to that restaurant. In the same way, we can use the data obtained from the Foursquare API to match other places like museums, clubs etc to potential visitors.

Furthermore, the data extracted shall also contain the exact location of the tourist spot in New York i.e. its latitude and longitude. Similar spots which are close to each other can be clubbed together and suggested to the tourists saving both their time as well as money. This information can also be utilized to prepare tourist bus routes and specialized packages for the visitors, optimizing their tour and providing an overall seamless experience.